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OHIO EPA COMMENTS ON THE ENGINEERED WASTE MANAGEMENT FACILITY SAMPLING AND ANALYSIS PLAN (11/91) AND RESPONSE TO COMMENTS

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ENCLOSURE

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Response to Comments

1. Original comment #3, pgs. 2& 3: The response states that no ARAR or TBC could be presently identified that would prohibit the placement of the EWMF on-property. If the facility is a disposal facility for solid waste, section 3745-27-07 of the Ohio Administrative Code would prohibit location of a disposal facility above a sole source aquifer (see also original comment #6, pg. 5).

2. Original comment #4, pg. 4: No action is specified for this response. The response to this comment needs to be incorporated into the SAP in order for the reader to have a clear understanding of the document's objectives.

3. Original comment #10, pg. 10: It would seem in DOE's best interest to have a thorough investigation of both wetlands and endangered species possibly impacted by this facility considering the implications of NEPA on siting. There exists considerable potential for Indiana bats and cave salamanders to exist within the area to be affected by the EWMF. The fact that critical habitat for both of these organisms exists within the study area should be sufficient to justify a more indepth investigation than a "limited survey". See additional comments on the SAP below and the "Biological Sampling Analysis and Resources Report; Tech. Memo. 001" (March 1990, ASI/IT).

   Additionally, when does DOE intend to conduct the "limited survey" to look for wetlands indicators? Such a survey needs to be conducted during the growing season so that vegetation indicative of wetlands can be identified. DOE should discuss what wetland indicators will result in an off-property wetlands delineation.

4. Original comment #19, pg. 12: When will the "Regional Soils Naturally Occurring Constituents Sampling Plan" be submitted to the agencies for review? This information will be need for evaluating the results of the EWMF sampling effort.

5. Original comment #27, pg. 16: Sediment sampling is practical even if standing water is not present. Additionally, sediment sampling should be considered due to the potential of some contaminants to accumulate in sediments as a result of runoff from contaminated soils and vegetation.

6. Original comment #32, pg. 17: Justification for the use of uranium as the sole analyte should be incorporated into the document.

7. Original comment #43, pg. 21: The response to this comment failed to consider the placement of untreated wastes into the EWMF as is suggested in DOE's response to Ohio EPA original comment #4, pg. 4 of this document. Under which RI/FS program will the interactions of untreated wastes with other wastes and the facility be tested?

EWMF Sampling and Analysis Plan

1. Section 3.4, Attachment 2, pg. 18: "Radon-226" and "Radon-228" should be corrected to read Radium-226 and Radium-228 respectively.

2. Section 3.4, pg. 20, 2nd paragraph: Ohio EPA does not understand why it would be impractical to obtain data on sediment contamination within the study area. Sediments will accumulate in specific areas during episodic runoff events even if standing water is not present. Contaminants likely to bind with clay or silt particles may tend to accumulate and concentrate in areas of sediment deposition. DOE should consider conducting sediment sampling to determine any such effect caused by runoff in the study area.

3. Section 3.5, pg. 21, Table 6, Number of Samples, 1): DOE should include in the document a justification for collecting tree samples only in the wooded portion west of the north entrance. Why are no samples being collected from the pine plantation? DOE should discuss whether hardwood trees are more likely to accumulate uranium than are the pines or if this was an arbitrary decision. It would seem that the pines might be more susceptible to airborne contamination due to the ordinary presence of sap on the trees.

4. Section 3.5, pg. 21, Table 6, Number of Samples, 2): DOE should discuss when the "walkover survey" will be conducted. The time of year during which the survey is conducted will weigh heavily upon what is learned from the survey. What evidence of wetlands will DOE use as the trigger for completing a wetlands delineation?

5. Section 3.5, pg. 22, last paragraph: Surface water features need not be permanent to provide an exposure pathway for ecological receptors. Temporary or episodic surface water features are utilized by a number of ecological receptors

including but not limited to amphibians for breeding in the spring.

6. Section 4.3.2, pg 12, 1st paragraph: The intent of the first complete sentence on page 12 is not clear. DOE should not be sampling for HSL constituents from samples which have been archived or held for any period of time. VOC and semivolatile samples should be collected immediately upon retrieval of the sampling device.

7. Section 4.5, pg. 16, Figure 7: The proposed area of ecological characterization should include an area encircling the EWMF study area by 1000 feet. The ecological study cannot be limited to the north and east boundaries. Surface water runoff and fugitive emissions will result in the effected regions not being limited to areas perpendicular to the north and east boundaries. Additional off-site areas should be addressed in the direction of Paddys Run and to the south of the study area.

8. Section 4.5, pg. 17, 2nd paragraph: As stated in the above comments on DOE's responses, DOE should conduct a more indepth investigation than a "limited survey" for endangered species. This information will be necessary in determining NEPA compliance as well as compliance with the Endangered Species Act as a potential ARAR. The need for this investigation is supported by previous DOE work (Biological Sampling Analysis and Resources Report) which states potential habitat for both the endangered Indiana bat and the Cave salamander exist within the area to potentially be affected by the EWMF construction. The ASI/IT report (March, 1990) states, "... that all habitat classified as good must be considered to have high potential for containing these bats,...". Excellent and good habitat for the Indiana bat lie within or near the EWMF study area when comparing Figure 3-4 from ASI/IT (March 1990) to Figure 7 in the EWMF SAP. All of this information points to the fact that DOE will need additional investigations to decide NEPA and Endangered Species Act compliance.

9. Section 4.5.2, pg. 17, last paragraph: A clear objective needs to be defined for collecting tree samples for uranium. Table 6 defines the objective to be, "Evaluate the potential environmental impacts and ecological risks of removal and disposal of trees (if shown to be contaminated) from the EWMF study area." If disposal characterization is the goal, then it would seem core samples would provide the best data as to the average concentration of uranium in the tree (since the largest mass of the tree will be tied up in the trunk and

branches not twigs and leaves). If determining baseline conditions in the trees prior to construction of the EWMF is the goal then possibly twigs and leaves are the preferred tissue (since this tissue is most likely to reveal short-term changes in concentration). An additional factor which must be considered in determining the tissue to be sampled is the fact that airborne emissions of uranium have significantly been reduced in the past few years. Will this fact effect the ratio of uranium concentration in twigs and leaves to that in the trunk and large branches (i.e., would previous airborne deposition of uranium on the plant result in a higher concentration of uranium in older plant tissue)?

10. Appendix A, pg. 5, Table A.1: Additional analytes which need to be included in this test are Antimony as well as organic constituents of concern. Cementation/Stabilization will not necessarily bind organic constituents and the leachablility of these contaminants over extended periods of time needs to be assessed. Antimony is an inorganic constituent of concern in a number of the waste streams and needs to be addressed in this analysis.

cc: Jenifer Kwasniewski DERR/CO